A Revolution In Learning . . .

THE UNIVERSITY OF INFORMATION TECHNOLOGY

Patrick Swan

Introduction

A college student who spends 20 years attending a university but never graduates is called a slacker, or worse. A student-soldier who does the same thing at the Army Signal Center's University of Information Technology (UIT) is called a success. Here's why.

UIT was founded on the premise of "lifelong learning." According to COL Pete Farrell, Deputy Commander, Army Signal Center, "If you don't use your skills, you will lose them. Right now we have very lengthy resident courses that try to cover all critical tasks. But these tasks are perishable if not employed in the first-duty assignment. Likewise, because of rapid advances in technology, skills taught at school can quickly become obsolete. Knowing this, we can't continue to do business as usual."

UIT offers what Farrell calls a "revolutionary approach to training," which involves cutting down on lengthy resident training and providing soldiers needed skills at the "teachable moment." A key feature of the UIT training-and-education model is its focus on specific equipment and technology that Signal soldiers and officers will use at their first duty stations.

"When a soldier arrives here for advanced individual training, we identify early on where his or her assignment will be," Farrell says. "That allows soldiers to get to the field quicker, cheaper, and more focused on what they need to know. Soldiers in the university's first advanced individual training classes graduated in early 2002.

After students complete Advanced Infantry Training (AIT), the school offers a database of simulations and other technology-assisted tools that allow Signal soldiers to learn new equipment and technologies from anywhere in the world using standard computers. Unlike the current Army resident training process, which has a gap of several years between AIT and the Basic Noncommissioned Officer Course (BNCOC), UIT offers technical Signal training as needed throughout a soldier's career.

Training Model

"UIT is the Army training model of the future," says Miriam Browning, Director for Enterprise Integration for the Army Chief Information Officer (G-6). "UIT's cutting-edge IT training model gets Signal soldiers in units faster and trains them for just-in-time mission tasks. From a business perspective, UIT saves the Army time and money as well because it reduces training-cycle times, requires fewer instructors, and reduces equipment costs. UIT's life-long learning model integrates traditional classroom training with simulations and computer-based training. This provides our soldiers with anytime, anywhere access to the skills and knowledge they need to do their jobs. UIT is a remarkable breakthrough in soldier training, in line with Army transformation goals for agile, technology-empowered soldiers."

The UIT Lifelong Training Model serves as the prototype model of change for the entire U.S. Army Training and Doctrine Command (TRADOC), Farrell adds. "Efforts are underway by TRADOC to adapt this model to all their schools."

Simulations Training

Tasks performed by Signal and IT soldiers and leaders are especially well-suited for PC-based simulations training, says MAJ Heather Meeds, Chief of the Systems Integration Division, Directorate of Training at the Signal Center. Most skills required to perform these tasks can best be acquired via the "learning by doing"

technique. Farrell adds that personal computer-based simulations are central to moving training from a completely resident-based program to a lifelong program. The simulations decrease students' reliance on actual signal equipment.

Simulations could cover almost any technical area including basic equipment operations and familiarization, troubleshooting, leader training, and tactical scenarios. UIT planners are also exploring a short physical return to Fort Gordon between AIT and the BNCOC to keep soldiers updated on new skills and changes in technology, but no approval has yet been given.

"As soldiers' careers progress, inevitably they'll be assigned to operate equipment for which they haven't received AIT training. The common architecture and pieces of equipment being simulated are aligned for simple navigation through the training simulation exercise. Each level in the simulation becomes more specific to the training a soldier requires and makes it easier to keep pace with changes in equipment and technology," Meeds says.

Extended Classrooms

According to Farrell, "Virtual campuses and extended classrooms allow students to 'learn by doing' from any possible location. They are not tied to a classroom at any set location."

Presently, unit-run training centers already exist at select locations, such as Fort Lewis, WA; Fort Hood, TX; Fort Huachuca, AZ; and wherever there are high densities of Signal soldiers.

"UIT will use remote or extended classrooms to bring training to Signal soldiers worldwide," says CW5 Wayne Jensen, who supports the university task force with hardware and networking expertise.

"Extended campuses provide a simple and inexpensive solution to technical problems, such as time differences and slow World Wide Web access," Jensen says. "The term 'extended campus' doesn't denote an area where you'll find physical classrooms; 'extended campus' denotes the technological part of the concept. Extended classrooms are as simple as a PC connected in the soldier's home or as complex as a formal classroom with 20 PCs connected to the Internet. The classrooms provide individual soldiers the ability to access a training environment rich in content. Formal, extended classrooms provide an environment for facilitators to administer proctored tests, provide assignment-oriented training, and train small groups of soldiers. Finally, extended classrooms allow soldiers to obtain just-in-time training tailored to their individual requirements without having to attend classes at formal training facilities."

Although high-tech classrooms may not be available at all training locations, UIT isn't delaying implementation of technology-assisted learning programs. "The university's goal is to develop content for education and training," Meed says, "and to make this content accessible and available to the student on-demand. This goal includes access in an individual's home, if necessary." Such virtual classrooms incorporate a set of modern training tools such as study guides, notice boards, student forums, online mentoring, and an interactive multimedia courseware library, all of which are aimed at meeting the individual soldier's needs.

Virtual Classroom Benefits

According to Jensen, "The virtual classroom provides many benefits of the traditional classroom while enjoying the major advantages of training delivered over the Internet that can be accessed at any time from any place. Soldiers are able to choose the most convenient time and place and to structure the training program to suit their precise individual requirements."

UIT is committed to providing an e-learning environment that delivers just-in-time training with just enough practical exercises and simulations to commanders and soldiers at any location worldwide. One example is for soldiers deploying from their home stations for military contingencies.

"Let's say a unit is deploying to a remote part of the world," says SFC Phillip G. Arnold, Chief, Team Signal-Gordon Interim Brigade Combat Team/Army Transformation, Fort Gordon, GA. "They will probably ship their signal equipment and user manuals separately. This means they may spend 45-60 days without equipment on which to train. Their skills will atrophy," he added.

"However, because of UIT three-dimensional simulations, soldiers can continue to train on their equipment virtually," Arnold says. "Once they get their equipment back, they'll be just as competent on it as when they shipped it out—no matter how long ago that may have been."

"Information technology is changing our lives and changing our Army. It makes sense that our education and training strategies must also change. How we train our soldiers and leaders for this ever-changing information technology must truly be a lifelong approach," Farrell says.

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